

Work Order ID 56804

March 10, 2010 1:29:39 PM



Page 1

Item ID: D3319-3

Accept



Setup Start



Revision ID:

Item Name: Wearplate

Stop



Start Date: 10/03/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 18/03/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

ll

Date:

103-10

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3319

Rev B

100

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3319

☐ Dwg Rev: *B*

☐ Prog Rev: *B*

☐ 2-

Debur if necessary

1010.050

max way full 21

AB 10-3-15

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

AB 10-3-15

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

8.0603/15



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 56804

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Page 2

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130



Small Fab

Small Fab

Small Fab

Memo

Deburr if necessary

0.00

0.00

u/AD

140



Brake NC

Brake NC

NC BRAKE

Memo

Form using DT8326 & DT8261 as per Dwg D3319Rev: B SB 10/03/16

0.00

0.00

9

150



QC

Quality Control

QC6- Inspect dimensions to drawing

Memo

0.00

0.00

S 10/03/16

49

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 3

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Start Date: 10/03/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 18/03/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160



Large Fab

Large Fab

0.00

Memo

0.00

Weld hard surface using D3319-3T2 per QSI 004 and Dwg D3319 Rev:

Qty, Part Number Description Batch A/R

N/A 7560 Hardcoat Rod 1117328

10-3-29 X9

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

5 wks / 29

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8 wks / 29

10-3-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID 56804

March 10, 2010 1:29:39 PM



Page 4

Item ID: D3319-3

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Revision ID:

Item Name: Wearplate

Stop



Start Date: 10/03/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 18/03/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190



Powdercoat

Powder Coating

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

N112580

0.00

Memo

0.00

START TIME:

3:20pm

OVEN TEMPERATURE:

3:50pm FINISH TIME:

320°F

=> 10/03/30

(X9) 0

200



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

10-3-3

(9)

210



Packaging

Packaging

Packaging

0.00

Memo

0.00

Identify on inside surface using a permanent fine point marker with the following: ☐ TCCA-PDA, Dart Aerospace Ltd. ☐ P/N: D3319-3, B/N: BXXXXX ☐ For Product Eligibility see PDA05-18 ☐ and Stock ☐ Location: _____

10-4-1 (9) SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID 56804

March 10, 2010 1:29:39 PM



Page 5

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Cust Item ID:

Required Date: 18/03/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/04/06 *[Signature]*
10-4-5
⑨

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March 10, 2010 1:29:43 PM

Page 1

Work Order ID: 56804



Parent Item: D3319-3



Parent Item Name: Wearplate

Start Date: 10/03/2010

Required Date: 18/03/2010

Comments: IPP: A ☐ 05.05.12 ☐ New issue ☐ KJ/JLM ☐
IPP Rev:B Now on Waterjet 06-10-03 JLM ☐

Start Qty: 12.00

Required Qty: 12.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M1010S18GA		Purchased	No			100	sf	6.0000	41.0829	31.		
1010/1025 SHEET .048												



HB10-3-15

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

MAT

6

109022

3

109948

3

111964

111964

9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	56804
Description: Wearplate		Part Number:	D3319-3
Inspection Dwg: D3319	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
75.52	+/-0.030	75.52	✓			
74.420	+/-0.010	74.420	✓			
62.770	+/-0.010	62.770	✓			
52.890	+/-0.010	52.890	✓			
30.790	+/-0.010	30.790	✓			
8.690	+/-0.010	8.690	✓			
0.60	+/-0.030	.605	✓			
2.690	+/-0.010	2.697	✓			
2.940	+/-0.010	2.942	✓			
3.527	+/-0.010	3.529	✓			
4.518	+/-0.010	4.516	✓			
Ø0.190	+0.005/-0.001	.194	✓			
2.940	+/-0.010	2.942	✓			
2.940	+/-0.010	2.942	✓			
2.690	+/-0.010	2.697	✓			
5.063	+/-0.010	5.063	✓			
6.163	+/-0.010	6.160	✓			
Ø0.316 x 0.607	+0.006/-0.001 x +/-0.010	.316 x .609	✓			
0.048	+/-0.010	.048	✓			

Measured by:	DB
Date:	10-3-15

Audited by:	S
Date:	10/3/15

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.07.18	New Issue	KJ/JLM	BE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

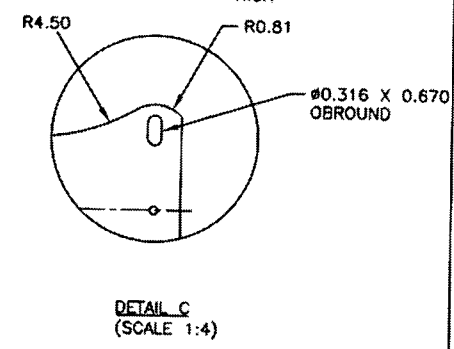
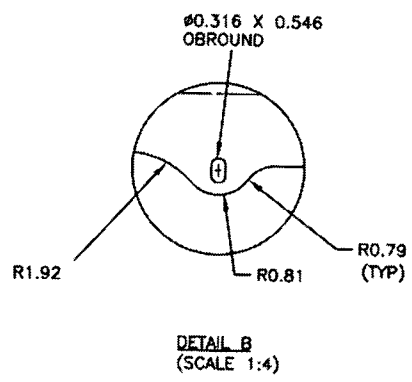
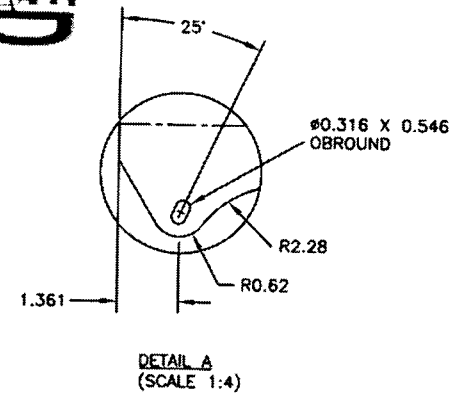
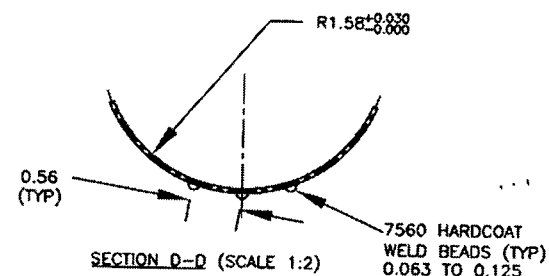
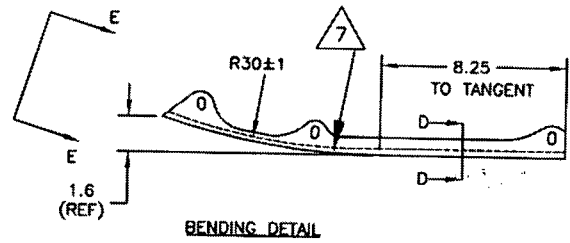
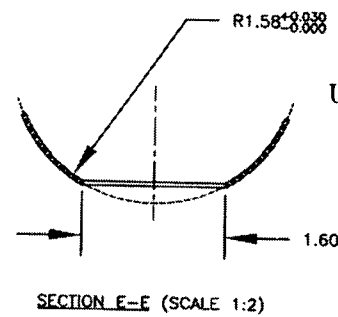
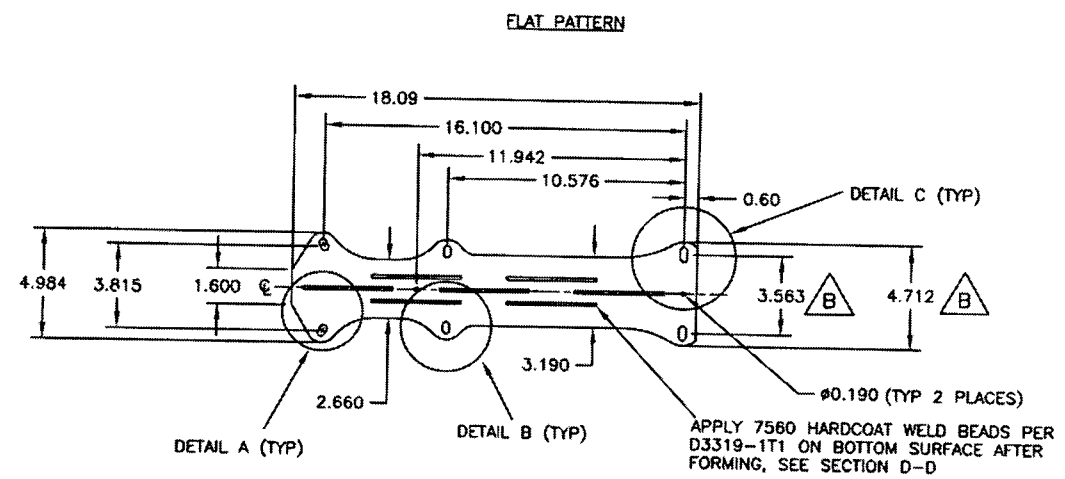
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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RELEASED
05-09-30



- D3319-1 WEARPLATE**
- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
 - 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) PART IS SYMMETRICAL ABOUT CENTERLINE
 - 5) ALL DIMENSIONS IN INCHES
 - 6) WELD PER DART QSI 004
 - 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18"

SHOP COPY
RETURN
ENGINEER
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK OF
NO. 56804
B10-3-10
56804

DESIGN	DRAWN BY	DART AEROSPACE LTD
P1	04	HAMKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
05.06.06	04.09.24	D3319
DATE	TITLE	REV. B
05.06.06	WEARPLATE	SHEET 1 OF 5
A	NEW ISSUE	SCALE
B	WIDEN HOLES, REDUCE WIDTH -3/-5/-7	1:8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

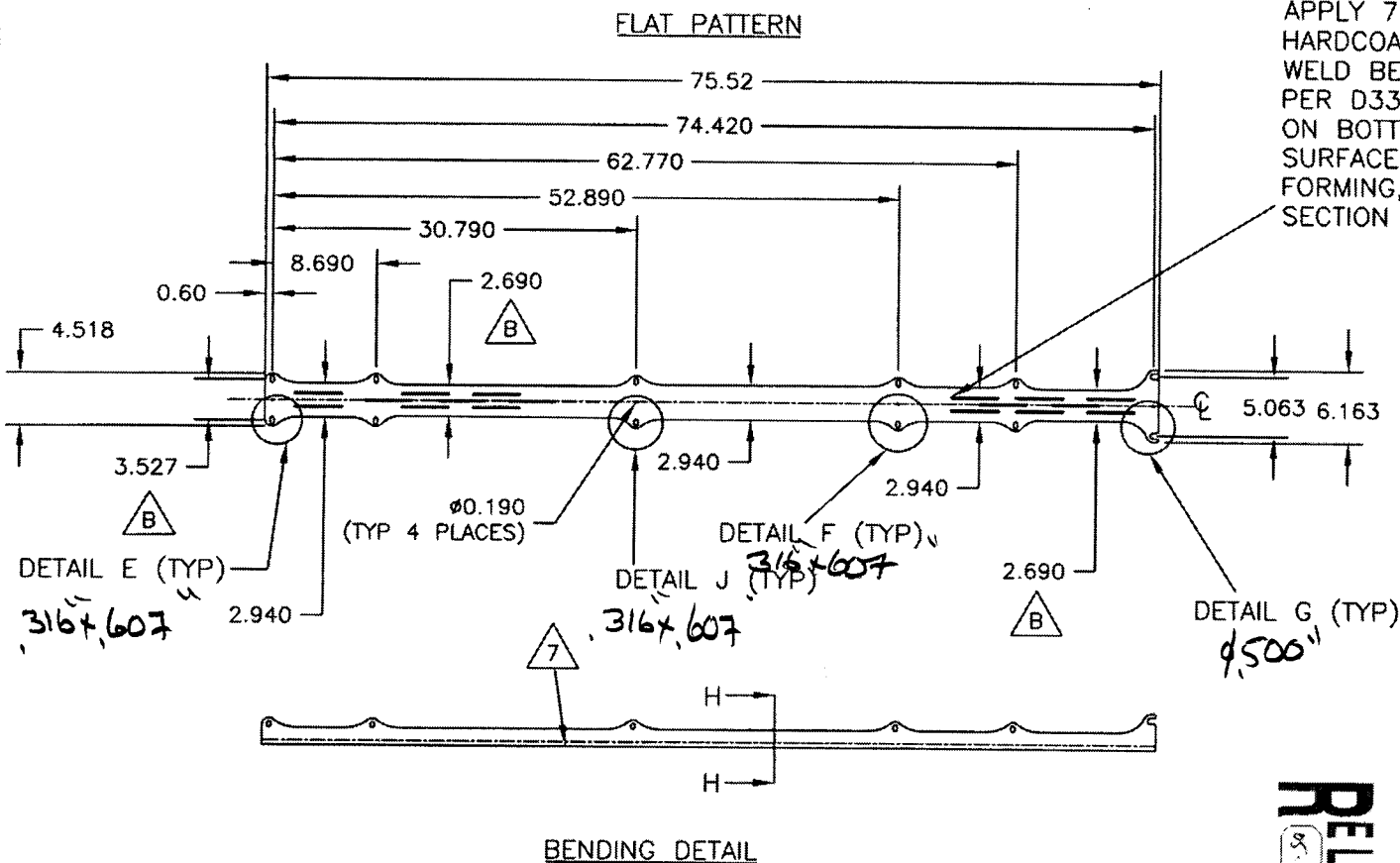
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN	07	DRAWN BY	07	DART AEROSPACE LTD
CHECKED		APPROVED		HAWKESBURY, ONTARIO, CANADA
DATE	05.06.06	TITLE	D3319	REV. B
				SHEET 2 OF 5
				SCALE 1:15
				WEARPLATE

APPLY 7560
HARDCOAT
WELD BEADS
PER D3319-3T1
ON BOTTOM
SURFACE AFTER
FORMING, SEE
SECTION H-H



D3319-3 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-3 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

RELEASED
05.04.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

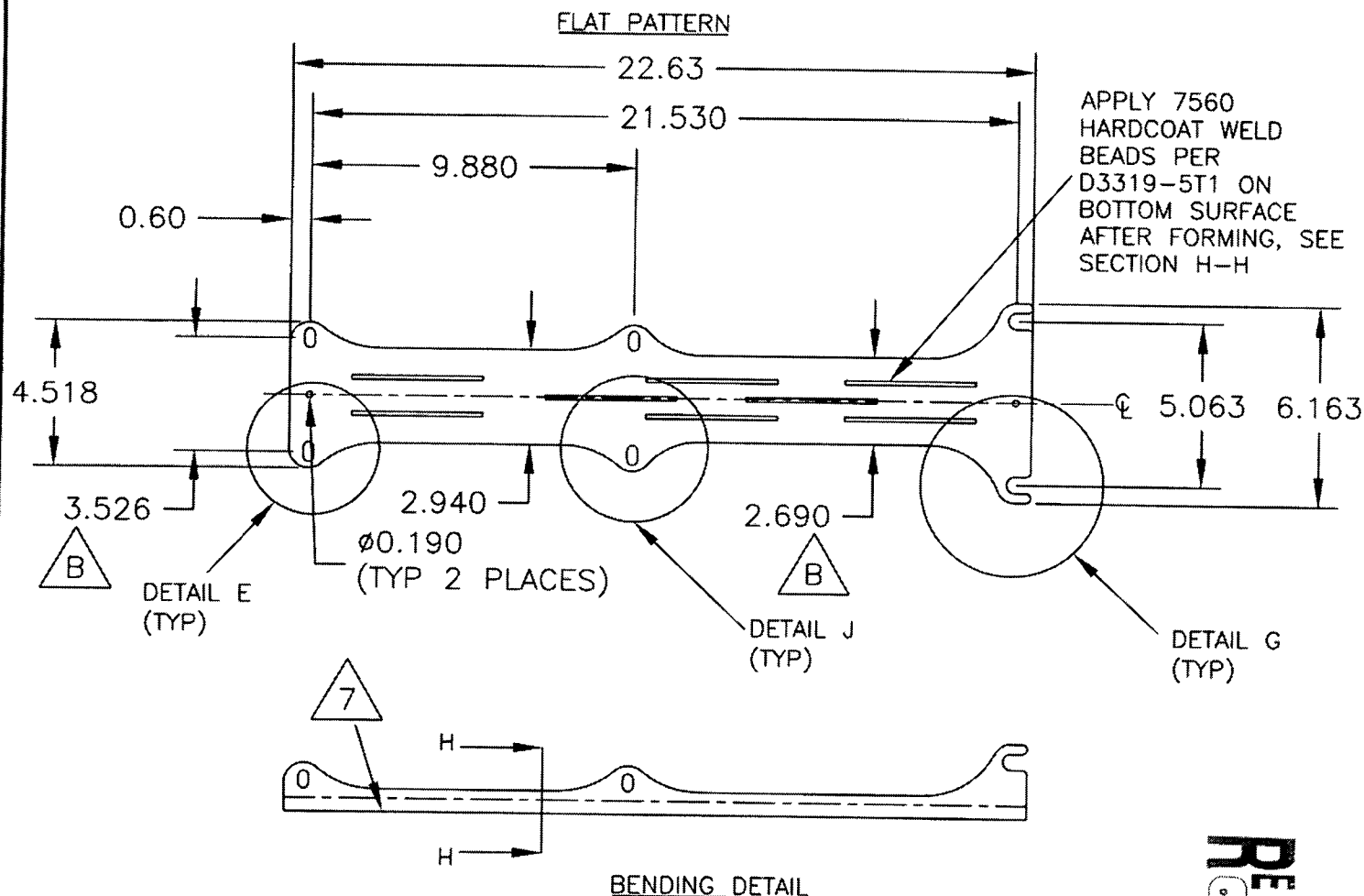
NOTE: Date & initial all entries

DART

DESIGN	041	DRAWN BY	041	DART AEROSPACE LTD
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
DATE	05.06.06	DRAWING NO.	D3319	REV. B
		TITLE	WEARPLATE	SHEET 3 OF 5
		SCALE	1:5	

*11/6 SC 804***RELEASED**
05-07-30-11

APPLY 7560
HARDCOAT WELD
BEADS PER
D3319-5T1 ON
BOTTOM SURFACE
AFTER FORMING, SEE
SECTION H-H



D3319-5 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-5 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

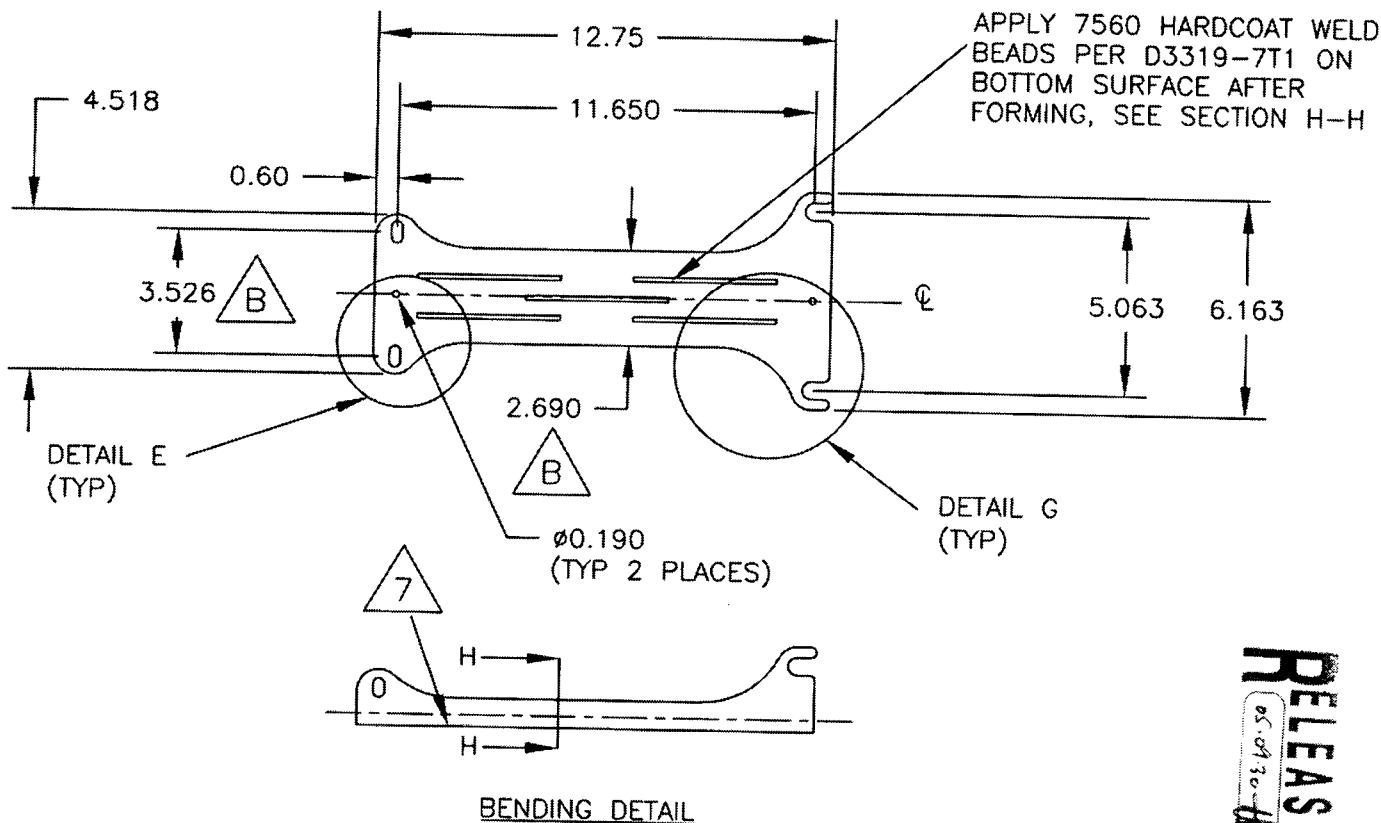
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN	PH	DRAWN BY	GH	DART AEROSPACE LTD
CHECKED	PH	APPROVED	GH	HAWKESBURY, ONTARIO, CANADA
DATE	05.06.06	TITLE	D3319	REV. B
		WEARPLATE		SHEET 4 OF 5
				SCALE
				1:5

RELEASED
05.09.30-11**FLAT PATTERN****D3319-7 WEARPLATE**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-7 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

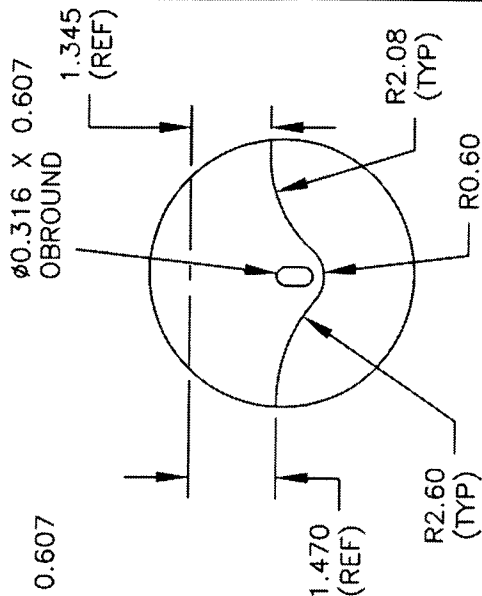
NOTE: Date & initial all entries



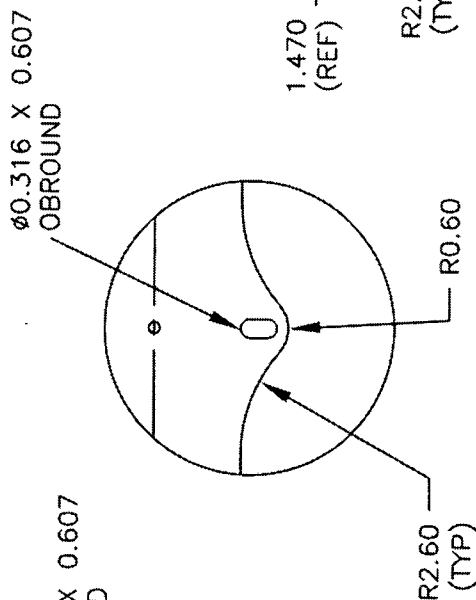
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CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3319	REV. B SHEET 5 OF 5
DATE 05.06.06		TITLE WEARPLATE	SCALE 1:3

WLD 56804

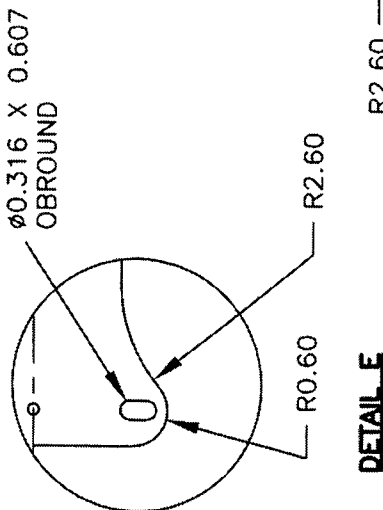
RELEASED
05.09.30



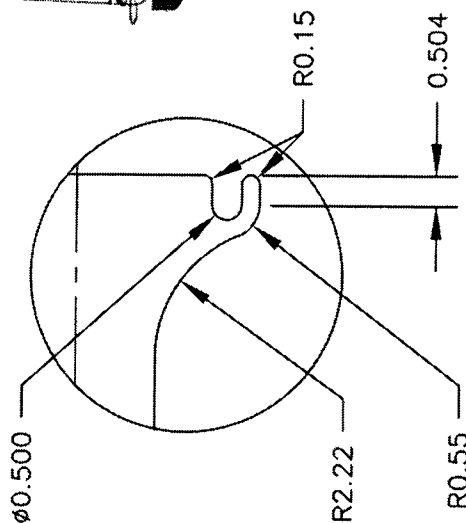
DETAIL J



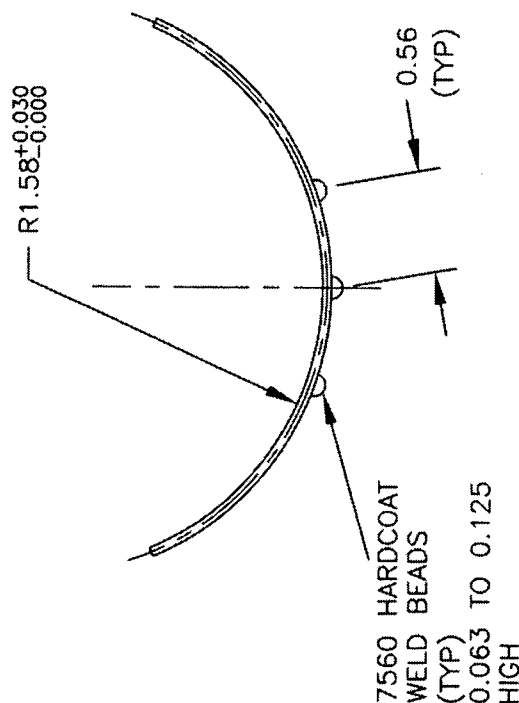
DETAIL F



DETAIL E



DETAIL G



SECTION H-H
(SCALE 1:1)

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries